

IN THE SPECIFICATION:

Please amend the section title immediately preceding paragraph [0001] as follows:

CROSS-REFERENCE TO RELATED APPLICATIONS APPLICATION

Please amend paragraph [0007] as follows:

[0007] Another concern in the manufacture of a combination ladder, or any ladder, is providing the ladder with sufficient rigidity. In other words, the side rails and other ladder components should not exhibit excessive deflection, either in bending or in torsion, while under loaded conditions. One prior art approach for improving the rigidity of a ladder includes providing a support brace that extends, for example, between the lower side rails and attaches to a rear face of each. Thus, when a ladder experiences loading, a portion of the loading may be transmitted to such brace, helping to maintain the two side rails from becoming displaced outwardly from one another. Another prior art approach has been to provide a pair of ~~braces~~ braces, each of which ~~extend~~ extends between a lower rung of the ladder and a front wall or a rear wall ~~of or of an~~ outer rail of the ladder.

Please amend paragraph [0012] as follows:

[0012] The sleeve configuration as described above also may allow the inner rails to be positioned relative to the outer rails so that the ladder height may be increased or reduced, and thus, may facilitate the extension capability of a combination ladder. Therefore, the sleeve configuration may allow an engagement mechanism to selectively and reversibly affix the inner rails to the outer rails, so that the ladder may be used in a number of different conditions. For example, engagement of an inner and proximate outer side rail to one another may be accomplished by way of a removable pin ~~extending through~~ through the outer side rail and sleeve affixed thereto and into an aperture within the inner rail so that the inner rail may be engaged to the sleeve and outer side rail proximate thereto.

Please amend paragraph [0020] as follows:

[0020] FIG. 2 is a front view of an inner~~and~~ and an outer rail assembly of the present invention;

Please amend paragraph [0021] as follows:

[0021] FIG. 3A is a front perspective view of a sleeve~~and~~ and an outer rail assembly according to an embodiment of the present invention;

Please amend paragraph [0034] as follows:

[0034] FIG. 7E is a reverse perspective of the hinge assembly of FIG. 7D shown in a ~~close~~ closed rotational position.

Please amend paragraph [0037] as follows:

[0037] Referring now to FIG. 2, a rail assembly 100 in accordance with an embodiment of the present invention is shown. The rail assembly 100 includes a pair of laterally spaced outer rails 102 and a pair of laterally spaced inner rails 104. The outer rails 102 and inner rails 104 are operably and slidably coupled to one another by means of discrete slide members 106, also referred to herein as sleeves. The sleeves 106 are fixedly coupled to associated outer rails 102 and are slidably coupled to associated inner rails 104. Thus, the sleeve members enable the outer rails 102 to be slidably displaced relative to inner rails 104 along a longitudinal axis 107, which is substantially parallel to the inner rails 104. A pair of releasable engagement mechanisms 108 are each associated with an outer rail 102, an inner rail 104 and a sleeve 106~~so as to~~ so as to enable selective locking of the inner rails 104 at desired longitudinal positions relative to the outer rails 102 and sleeves 106.

Please amend paragraph [0038] as follows:

[0038] Inner rungs 110 extend between and are coupled to inner rails 104. For example, an inner rung 110 may, in one embodiment, include a substantially tubular member that extends at least partially through an opening defined by an inner rail 104 having an end of the

inner rung 110 swaged so as to fix the inner rung 110 to the inner rail 104. In other embodiments, the inner rungs 110 may be coupled to the inner rails 104 by rivets, adhesive bonding, welding, mechanical fasteners or a combination thereof depending, for example, on the type of materials used to form the inner rungs 110 and inner rails 104. Similarly, outer rungs 112, shown in dashed lines in FIG. 2 for purposes of clarity, extend between and are coupled to outer rails 102. The outer rungs 112 may be coupled to the outer rails 102 by an appropriate technique, including one or more of those set forth above. In one embodiment, the outer rungs 112 may be configured to include fastening tabs through which rivets or other appropriate mechanical fasteners may extend for coupling of the outer rungs 112 with the outer rails ~~rails 102~~. In one particular embodiment, the fastening tabs may be integral with the rung such that they are formed as a unitary or monolithic member. Such rungs, and exemplary techniques of fastening such rungs, are disclosed in United States Application Publication No. US20030188923A1, filed April 5, 2002, entitled LIGHT WEIGHT LADDER SYSTEMS AND METHODS, assigned to the Assignee of the present invention, the disclosure of which is incorporated herein by reference in its entirety.

Please amend paragraph [0042] as follows:

[0042] As noted above, the present invention enables both the inner rails 104 and the outer rails 102 to be formed as substantially straight members if so desired. However, it is noted that the outer rail ~~104~~ 102 need not be formed as a substantially straight member in all instances. Additionally, while outer rails 102 are shown in FIG. 2 to be configured as a single member, the outer rails 102 may be formed of multiple members rigidly fixed to one another if so desired. However, for purposes of manufacturing simplicity and structural soundness, it may be desirable to form the outer rails ~~104~~ 102 as a single member such as shown.

Please amend paragraph [0045] as follows:

[0045] A support member 132 may extend between and be attached to each of the outer rails 102 as well as the sleeves 106 by way of connection elements 130. As shown in FIGS. 3A and 3B, the support ~~member~~ member 132 may be located on the rear face 134 of the outer

rails 102, generally opposite where an outer rung 112 is attached, such that the support-member ~~member 132~~ does not interfere with or otherwise act as an obstruction to a user of the ladder. A wear plate 140 may be formed about the outer-rail- ~~rail 102~~ in the general location of the releasable engagement mechanism 108 (not shown in FIGS. 3A – 3C for clarity, see FIG. 2) to protect the outer rails 102 from wear associated with repeated interaction of the engagement mechanism with the outer rails 102. Apertures 150 in sleeves 106 may be aligned with apertures 152 in the outer rails 102 and apertures 154 in wear plate 140 to accommodate, for example, insertion and retraction of a biased pin associated with the engagement mechanism 108 (FIG. 2). Such apertures 150, 152 and 154 may then be selectively aligned with similar apertures formed in the inner rails 104 (FIG. 2) for selectively positioning and locking the inner rails 104 with respect to the outer rails 102 and associated sleeves 106.

Please amend paragraph [0046] as follows:

[0046] Additional apertures 156 and 158 may be formed in the-sleeves- ~~sleeves 106~~ at various locations for tooling and/or assembly purposes. For example, such apertures 156 and 158 may provide access to connection elements 130 during assembly of the ladder. Referring to apertures 156, in another embodiment, such apertures 156 may be sized and configured to physically and mechanically interact with the connection elements 130 rather than simply allow access thereto.

Please amend paragraph [0061] as follows:

[0061] Turning now to FIG. 7A, a hinge assembly 300 is shown according to an embodiment of the present invention. The hinge assembly 300 includes a first hinge component 220 disposed within and affixed to an inner rail 104 and a second hinge component 242 also disposed within and affixed to an inner rail 104. As discussed above, the outer periphery 302 of the first hinge component's rail mount section 230 substantially conforms to and cooperatively mates with the inner periphery 304 of the inner rail 104. Similarly the outer periphery 306 of the second hinge components rail mount section 262 substantially conforms to the inner periphery 308 ~~the- of the~~ inner rail 104 to which it is mounted. The hinge tongue 222 of

the first hinge component 220 fits within and matingly engages the grooved segment 244 of the second hinge component 242. A selectable hinge positioning and locking mechanism (not shown in FIG. 7A) may be disposed in the pivot apertures 226 enabling relative rotation of the first hinge component 220 and the second hinge component 242 about a defined axis 310 as will be appreciated by those of ordinary skill in the art. Additionally, the hinge positioning and locking mechanism may be used to selectively engage the locking apertures 224 of the first and second hinge components 220 and 242 thereby selectively locking the hinge assembly 300 in a desired rotational position.

Please amend paragraph [0063] as follows:

[0063] Referring briefly to FIG. 7B, a cross-sectional view of the hinge component 242 mounted within its associated inner rail 104 is shown according to one embodiment of the present invention. The outer periphery 306 of rail mount section 262 of hinge component 242 thus substantially conforms the inner periphery 308 of the rail 104 in an interlocking manner. It is noted that other cross-sectional geometries for hinge components may be utilized. For example, referring briefly to FIGS. ~~5A and 5B~~ 6A and 6B along with FIG. 7B, the first and second reinforcing segments 250 and 254 of the second hinge component 242 need not exhibit a substantially circular shape cross-sectional geometry. Additionally, the first reinforcing segment 250 need not exhibit the same cross-sectional geometry as the second reinforcing segment 254. Moreover, the web segment 252 need not include a surface that is substantially tangent with a surface of each reinforcing segment 250 and 254. Rather, in one exemplary embodiment, the web segment 252 may be configured such that it extends from each reinforcing segment 250 and 254 in a substantially radial relationship therewith forming a dog bone-type geometry. In any case, the interior cross-sectional geometry of the rail 104 may be sized and configured to substantially conform and cooperatively mate with the cross-sectional geometry of the hinge component's rail mount section 262.

Please amend paragraph [0064] as follows:

[0064] Referring briefly to FIG. 2, another advantage of such cross-sectional geometries having a relatively thinner web segment 206, 252 includes the ability to attach an inner rung 110 to an inner rail 104 with a swaged connection, such as disclosed in U.S. Patent Application Number 10/117,767, now U.S. Pat. No. 6,866,117, to Moss, assigned to the assignee of the present invention, while maintaining adequate clearance between the swaged connection and the sleeves 106 and/or the outer rails 102 that slide relative thereto. Without such clearance, the cross-sectional geometry of the sleeves and/or outer rails 102 may have to be modified so as to not interfere with the connection between the inner rung 110 and inner rail 104.

Please amend paragraph [0065] as follows:

[0065] Referring back to FIG. 7A, the hinge assembly 300 may further include an antipinch mechanism. In the embodiment shown in FIG. 7A, the antipinch mechanism may include a biased protruding member 350 operably disposed within one or more of the structural reinforcement segments (e.g., 208, 250, 254 of FIGS. 5A and ~~5B~~-6A) of the hinge components 220 and 242. For example, as shown in FIG. 7C, the antipinch mechanism may include a biasing member 352, such as a coil spring, disposed within a reinforcement segment 208 of a hinge component 220, the biasing member 352 having a lower end fixed to or abutting a first stopping member 354. The stopping member 354 may include, for example, a set screw, an indented portion of the reinforcement segment 208, a machined shoulder within the reinforcement segment or other similar structure as will be appreciated by those of ordinary skill in the art. A protruding member 350 may be disposed within the reinforcement segment 208 and biased such that the protruding member 350 protrudes out the upper end 356 of the reinforcement segment 208. Another stopping member 358 may be used to limit the longitudinal travel of the protruding member 350 such that at least a portion thereof remains within the reinforcement segment 208.

Please amend paragraph [0070] as follows:

[0070] Referring briefly to FIGS. 7A, 7D and 7E, another feature of the present invention is shown. The abutment shoulders 229 of the first hinge component 220 are each shaped and configured so as to abuttingly engage one of the laterally spaced plates that define the hinge groove 260 when the hinge-~~assembly~~-~~assembly~~ 300 is rotated into the closed position (i.e., as shown in FIG. 7E). Thus, when the hinge assembly is in a closed position such as for straight or extension ladder configurations, loadings applied to the ladder are transferred directly between the abutting contact of the two hinge components 220 and 242, including the complementary and cooperative abutting contact of abutment shoulders 229 of the first hinge component 220 with the laterally spaced plates of the hinge groove 260. Such a configuration also enables direct transfer of force between the reinforcement segments 204 and 208 of the first hinge component 220 with the first and second reinforcement segments 250 and 254 of the second hinge component 242. Thus, the first hinge component 220 and second hinge component 242 effectively act as a single continuous beam or column when placed in the closed position. Such is in contrast to prior art mechanisms wherein loadings were transferred solely by way of locking pins 364 (see FIG. 7E).